Model Based Design of Aerospace Control Systems

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Abstract

"Within the last few decades the microprocessor has developed at a rapid pace creating in its wake a large number of technologies and applications like mobiles, laptops, desktop supercomputers and so on. Aerospace vehicles were and continue to be at the forefront of exploiting these "embedded control systems". The huge surge in computational power has enabled better modeling and control of complex aerospace systems including hardware and
software. At the same time the complexity of onboard software has also grown exponentially. The design of control for aerospace vehicles falls within the area of "Safety critical systems". In such systems a large part of the design is driven by the need to maintain safety, because the consequences of a failure can be catastrophic. It is not hard to imagine the public outcry when a 300 seater passenger aircraft crashes or a missile falls in the wrong place. In this talk the speaker will explain how model based design of control systems promises to be a powerful tool for safety critical aerospace control systems."